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			EXAMINER VO, ANH T N	
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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/694,145

Filing Date: October 27, 2003

Appellant(s): HORN ET AL.

Peter Kraguljac
For Appellant

MAILED
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GROUP 2800

EXAMINER'S ANSWER

This is in response to the appeal brief filed 8/24/2007 appealing from the Office action mailed 3/28/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

Art Unit: 2861

(8) Evidence Relied Upon

US2002/0170891	Boyle et al	11-2002
6,902,867	Hall et al	06-20051
5,608,436	Baughman et al.	03-1997

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim 6 is rejected under 35 USC 102 (e) as being unpatentable over Boyle et al (Pub No. US 2002/0170891).

As the best construed, Boyle et al disclose in Figures A-B and 1-2 a device comprising:

- a substrate (Si) having a feature (slot), the feature extending into the substrate (Si) and within the substrate along an axis, where a cross-section of the feature taken transverse the axis has an upper terminus (top) proximate a first substrate surface, the upper terminus having a first profile (Figure A); and
- where the upper terminus (top) is formed to have a second profile different from the first profile and where the feature comprises a fluid-handling slot (Figure B).

Noted that the limitations of the steps “a first process that removes substrate material from the substrate and a second different process that removes additional substrate material from the substrate and also removes debris created by the first substrate removal process” as called for in claim 6 is not given patentable weight, since claim 6 is a product by process claim that is a product claim. This product-by-process claim 6 is not limited to the manipulations of the recited steps (processes), only the structure implied by the steps that are not evident and that the product itself does not depend on the process of making it. *In re Marosi*, 218 USPQ 289, 292 (Fed.Cir.1983) and accordance with MPEP 2113, Product-by- Process claims.

Claims 6 and 34-38 are rejected under 35 USC 102 (b) as being anticipated by Baughman et al. (US Pat. 5,608,436).

Baughman et al. disclose in Figures 4A-6D an ink jet print head comprising:

- a substrate (12) having a feature, the feature extending into the substrate (12) and within the substrate along an axis, where a cross-section of the feature taken transverse the axis has an upper terminus proximate a first substrate surface (12a), the upper terminus having a first profile (Figures 4A-4B);
- where the upper terminus is formed to have a second profile different from the first profile and where the feature comprises a fluid-handling slot (18). (Figures 4C-4D);
- a substrate (12) comprising at least a first substrate surface (12a) and a second substrate surface (12b) (Figure 4C);
- a fluid-handling slot (18) formed and extended through the substrate (12) between the first substrate surface (12a) and the second substrate surface (12b) (Figure 4D);
- an orifice layer (22) positioned over the first substrate surface (12a), the orifice layer (22) having multiple firing nozzles (20) formed therein, at least some of the nozzles (22) being in fluid flowing relation with the fluid-handling slot (18) (Figure 4D); and
- a print cartridge (not shown) comprising, at least in part, the fluid-ejecting device a substrate (12) for supporting overlying layers (22, 17, 26) (Figure 4D).

Noted that the limitations of the steps “a first process that removes substrate material from the substrate; a second different process that removes additional substrate material from the substrate and also removes debris created by the first substrate removal process; where the first substrate removal process comprises using a laser and the second substrate removal process comprises using abrasive particles; wherein at least one of the first substrate surface and the second substrate surface being processed by at least one of the removal processes prior to the orifice layer being positioned over the first substrate surface, at least in part, to reduce an incidence of debris occluding ink flow through individual nozzles; wherein the fluid-handling slot is formed utilizing three distinct substrate removal processes; and wherein the fluid-handling slot

is formed utilizing at least one substrate removal process directed at the first substrate surface and at least two different substrate removal processes directed at the second substrate surface” as recited in claim 6, 34 and 38 are not given patentable weight, since claims 6, 34 and 38 are product by process claims that are product claims. These product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps that are not evident and that the product itself does not depend on the process of making it. *In re Marosi*, 218 USPQ 289, 292 (Fed.Cir.1983) and accordance with MPEP 2113 Product-by- Process claims.

Claims 6 and 34-38 are rejected under 35 USC 102 (e) as being anticipated by Hall et al. (US Pat. 6,902,867).

Hall et al discloses in Figures 2-28 an ink jet printhead comprising:

- a substrate (32 or 150) having a feature (14 or 170), the feature extending into the substrate
- (32 or 150) and within the substrate along an axis, where a cross-section of the feature taken transverse the axis has an upper terminus proximate a first substrate surface, the upper terminus having a first profile (Figures 2 and 27);
- where the upper terminus is formed to have a second profile different from the first profile and where the feature comprises a fluid-handling slot (14 or 170) (Figures 2 and 28);
- a substrate (32) comprising at least a first substrate surface (top) and a second substrate surface (bottom) (Figure 2);
- a fluid-handling slot (14) formed and extended through the substrate (32) between the first substrate surface (top) and the second substrate surface (bottom) (Figure 2, (column 7);
- an orifice layer (36) positioned over the first substrate surface (top), the orifice layer (36) having multiple firing nozzles (40) formed therein, at least some of the nozzles (40) being in fluid flowing relation with the fluid-handling slot (14) (Figure 2); and
- a print cartridge (28) comprising, at least in part, the fluid-ejecting device (26) (Figure 2); and a substrate (32) for supporting overlying layers (34, 36) (Figure 2).

Noted that the limitations of the steps “a first process that removes substrate material from the substrate; a second different process that removes additional substrate material from the substrate and also removes debris created by the first substrate removal process; where the first substrate removal process comprises using a laser and the second substrate removal process comprises using abrasive particles; wherein at least one of the first substrate surface and the second substrate surface being processed by at least one of the removal processes prior to the orifice layer being positioned over the first substrate surface, at least in part, to reduce an incidence of debris occluding ink flow through individual nozzles; wherein the fluid-handling slot is formed utilizing three distinct substrate removal processes; and wherein the fluid-handling slot is formed utilizing at least one substrate removal process directed at the first substrate surface and at least two different substrate removal processes directed at the second substrate surface” as recited in claims 6, 34 and 38 are not given patentable weight, since claims 6, 34 and 38 are product by process claims that are product claims. These product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps that are not evident and that the product itself does not depend on the process of making it. *In re Marosi*, 218 USPQ 289, 292 (Fed.Cir.1983) and accordance with MPEP 2113, Product-by-Process claims.

(10) Response to Argument

1). The Appellant argues at page 9 of the Appeal Brief that claim 6 is not anticipated by the Boy reference because Boy do not suggest the limitation “a second different process that removes additional substrate material from the substrate to form an upper terminus having a second profile different from a first profile and the second process also removes debris created by the first substrate removal process” as called for in claim 6. The arguments are not persuasive because the ink ejecting device of Boy has the structure that is similar to the structure of claimed device as stated above. Claim 6 is the product-by-process claim so that the “second different process” would be included in the process of making the device of Boy since the product-by-process claim 6 is not limited to the manipulations of the recited steps, only the structure implied by the steps that are not evident and that the product itself does not depend on the process of

making it *accordance with MPEP 2113 Product-by- Process claims and In re Marosi, 218 USPQ 289, 292 (Fed.Cir.1983).*

2). The Appellant argues at page 11 of the Appeal Brief that the structure in claim 6 is not merely implied but explicitly recited. Therefore, the Examiner's reliance on MPEP §2113 to reject the claims is misplaced and the rejections are improper. The arguments are not persuasive because claim 6 is product-by process claim so that it is not limited to the manipulations of the recited processes as stated above *accordance with MPEP 2113, Product-by- Process claims, and In re Marosi, 218 USPQ 289, 292 (Fed.Cir.1983).* Thus, the reliance on MPEP §2113 is not misplaced and the rejection is not improper.

3). The Appellant argues in pages 13-15 of the Appeal Brief that claims 6, 34 and 38 are not anticipated by Baughman because Baughman does not suggest a second different process that removes additional substrate material from the substrate to form an upper terminus having a second profile different from a first profile and the second process also removes debris created by the first substrate removal process, and the Examiner's reliance on MPEP §2113 to reject the claims 6, 34 and 38 are misplaced and the rejections are improper.. The arguments are not persuasive because the device of Baughman has the same structure as the structure of the claimed device as stated above. Claims 6, 34 and 38 are product by process claims so that the limitation "second different process" as called for in these claims would be included in processes of making the device of Baughman. The product-by-process claims 6, 34 and 38 are not limited to the manipulations of the recited steps, only the structure implied by the steps that are not evident and that the product itself does not depend on the process of making it *accordance with MPEP 2113, Product-by Process claims, and In re Marosi 218 USPQ 289, 292 (Fed.Cir.1983).* Thus, the reliance on MPEP §2113 is not misplaced and the rejection is not improper.

4). The applicant argues at page 17-20 that claims 6, 34 and 38 are not anticipated by device of Hall because Hall does not suggest a second different process that removes additional substrate material from the substrate to form an upper terminus having a second profile different

from a first profile and the second process also removes debris created by the first substrate removal process, and the Examiner's reliance on MPEP §2113 to reject the claims 6, 34 and 38 are misplaced and the rejections are improper.. The arguments are not persuasive because the device of Baughman has the same structure as the structure of the claimed device as stated above. Claims 6, 34 and 38 are product by process claims so that the limitation "second different process" as called for in these claims would be included in processes of making the device of Hall. The product-by-process claims 6, 34 and 38 are not limited to the manipulations of the recited steps, only the structure implied by the steps that are not evident and that the product itself does not depend on the process of making it accordance with *MPEP 2113*, *Product-by Process claims*, and *In re Marosi 218 USPQ 289, 292 (Fed.Cir.1983)*. Thus, the reliance on MPEP §2113 is not misplaced and the rejection is not improper

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

(12) Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANH VO whose telephone number is 571-272-6662. The examiner can normally be reached on Monday-Friday (8AM-7PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Luu, can be reached on 571-272-7663.


Information regarding the status of an application may be obtained from the Patent (Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Conferees:

Matthew Luu: 
402 2861

Darren Schuberg: 


ANH T.N. VO
PRIMARY EXAMINER
November 02, 2007